Name and instrumentation of the piece:

Confluences (Rainbows II)
for flute, clarinet in B, violin, cello, piano and real-time electronics in 5.1 surround spatialization (2010/12)

Author:

Dr. Javier A. Garavaglia

Duration of the piece:

ca. 13 min

Program notes

The piece is based on another piece by the composer, in which a clarinet interacts with a computer in real time. This first piece was composed using with some music materials (musical themes) derived from a secret programme based on the personal past of the composer.

The musical materials in both pieces are exposed in fragmented form at the beginning and, as the work progresses, they appear more and more complete and transformed (through transpositions, inversions, etc.). Toward the end, the themes are interpolated with each other, forming new musical entities. Even though the quintet uses a similar internal structure as the original clarinet piece, there is a further development and a multiplication of voices in a complex counterpoint between the instruments and the electronics.

The real time DSP processes (composed using MAX) underline the processes and at the same time, evolve in the same way as the musical themes.

Technical specifications for the performance:

(1) Most indications can be found on the score or on the MAXMSP patch. The latter has been configured to run on a MOTU Traveler Interface, so that if any other Interface is needed for the performance, some changes in the way the ADC-DAC is set might be needed.

(2) The MAX Patch needs the file ***CONV*** to be in the same Folder where the patch is saved. The file ***SMPTE_17_Min*** is also needed for sending the SMPTE to a display, from which all musicians can read it. Some extra externals are also needed: *FFtease, fiddle.*

(3) The piece alternates metronomic indications in some parts with time given in seconds for others (which are free to perform within the times given). The Time Code times given in the score (SMPTE) must be followed with absolute precision, in order to synchronise accurately with the electronics. A SMPTE display on the stage should be used to follow those times. The electronics can be found in the MAXMSP patch. **The patch works automatically by pressing the start button. No further action is needed for the electronics to run. In order to run the patch, the file *SMPTE_17_Min.aif* must be loaded by MAX from the same folder as where the patch is located.**

(4) The electronics need 5 different microphones, one for each instrument. The input levels must be controlled through a mixing desk. However, their activation runs automatically directly from the patch. Recommended are cardiod, condenser microphones.

(5) Spatialisation is 5.1

1 2 3

LFE
(subwoofer)

5 4

(6) Equipment needed:

- Laptop running MAXMSP with the above mentioned files
- Audio Interface with 5x Input and 8x Output
- 5x condenser microphones, one for each instrument

- a 5.1. diffusion system, including a mixing desk and cables
- a SMPTE Display on the stage for the performer, to follow the times given on the score
- Set up time: about 1 hour, depending on venue and technical support.

(8) Stage plot and mixing desk set up.

- **Mixing desk inputs:** 5x microphones inputs to a MOTU interface (interface can be supplied by composer if needed) for the 5 microphones needed on stage. 5x line inputs from output of MOTU interface. TOTAL: 10 inputs.
- **Mixing desk outputs:** 5 outputs plus 1x for the subwoofer, for the 5.1 surround sound spatialisation indicated above in (5)
- Computer and Audio Interface should be close to the mixing desk, which should be ideally placed in the middle of the concert hall.
- Alternatively, 2 monitor boxes for the performers, which could be sent via auxiliaries from the main 5.0 output channels
- SMPTE display coming directly out of the MOTU interface via a Jack to XLR cable.

Stage plot:

Speaker 1	**Speaker 2**	**Speaker 3**

Piano (1x mic)

Flute (1x mic) **Clarinet (1x mic)**

Violin (1x mic) **Cello (1x mic)**

SMPTE Display
(can be supplied by composer)

AUDIENCE

Speaker 5	**Speaker 4**